

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ **BLACK BORDERS**
- ☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- ☐ **FADED TEXT OR DRAWING**
- ☐ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- ☐ **SKEWED/SLANTED IMAGES**
- ☐ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- ☐ **GRAY SCALE DOCUMENTS**
- ☐ **LINES OR MARKS ON ORIGINAL DOCUMENT**
- ☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- ☐ **OTHER:** _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.

| L Number | Hits | Search Text | DB | Time stamp |
|-------------|------|-------------|---|---------------------|
| - | 2 | 6023727.pn. | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/08/18 13:53 |
| - | 2 | 5933652.pn. | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/08/17 14:40 |
| - | 2 | 5878256.pn. | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/08/17 14:42 |
| - | 2 | 5826075.pn. | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/08/17 14:53 |

| | | | | |
|---|---|--|---|---------------------|
| - | 1 | (("4998165" "5214695" "5235651" "5650858" "5933652" "5477264" "5933631" "5394485" "5652868" "5657430" "5692190" "5694583" "5802363" "4583185" "4974078" "5519869" "5530531" "5640496" "5710829" "5754751" "5793350" "5847771" "6006039" "6014131" "6047317" "6122012" "6134567" "6191827" "6421776" "6429950" "6591010" "5291585" "5504905" "5586324" "5826075" "5878256" "5287519" "5341422" "5388156" "5432939" "5446898" "5465357" "5481709" "5495611" "5555373" "5574786" "5712973" "5754852" "5918007" "6141669").pn.) and 717/\$.cccls. | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/08/17 14:54 |
|---|---|--|---|---------------------|

| | | | | |
|---|----|--|---|---------------------|
| - | 98 | ("4998165" "5214695" "5235651" "5650858" "5933652" "5477264" "5933631" "5394485" "5652868" "5657430" "5692190" "5694583" "5802363" "4583185" "4974078" "5519869" "5530531" "5640496" "5710829" "5754751" "5793350" "5847771" "6006039" "6014131" "6047317" "6122012" "6134567" "6191827" "6421776" "6429950" "6591010" "5291585" "5504905" "5586324" "5826075" "5878256" "5287519" "5341422" "5388156" "5432939" "5446898" "5465357" "5481709" "5495611" "5555373" "5574786" "5712973" "5754852" "5918007" "6141669").pn. | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/08/17 14:54 |
| - | 0 | firmware adj family adj code | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/08/18 09:46 |
| - | 8 | firmware with family with code | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/08/18 09:52 |
| - | 27 | (family with code) and (updat\$3 with firmware\$1) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/08/18 10:45 |
| - | 20 | 5802365.URPN. | USPAT | 2004/08/18 10:23 |

| | | | | |
|---|-----|--|---|---------------------|
| - | 9 | (family with byte) and (updat\$3 with firmware\$1) | USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/08/18 10:46 |
| - | 9 | (famil\$3 with byte\$1) and (updat\$3 with firmware\$1) | USPÄT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/08/18 10:48 |
| - | 321 | 717/168.ccls. | USPÄT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/08/18 10:48 |
| - | 102 | 717/169.ccls. | USPÄT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/08/18 10:49 |
| - | 315 | 717/170.ccls. | USPÄT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/08/18 10:49 |
| - | 446 | 719/321.ccls. | USPÄT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB | 2004/08/18 13:53 |


[Subscribe \(Full Service\)](#) [Register \(Limited Service, Free\)](#) [Login](#)

 Search: ☒ The ACM Digital Library ☐ The Guide



THE ACM DIGITAL LIBRARY

[Feedback](#) [Report a problem](#) [Satisfaction survey](#)

Published before July 2001

Term used **Piazza**

Found 7 of 112,614

Sort results by

Display results

[Save results to a Binder](#)
[Search Tips](#)
☐ [Open results in a new window](#)
[Try an Advanced Search](#)
[Try this search in The ACM Guide](#)

Results 1 - 7 of 7

Relevance scale ☐ ☐ ☐ ☐ ☐

1 [Real-time systems: Merlot: a tool for analysis of real-time specifications](#)

Carlo Bellettini, Miguel Felder, Mauro Pezzè

December 1993 **Proceedings of the 7th international workshop on Software specification and design**Full text available: [pdf\(831.44 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#)

Real-time systems are becoming increasingly important in the everyday life. The use of such systems for critical applications requires tools and techniques for increasing correctness and reliability of the final product. In this paper, we describe a toolset (Merlot) for analyzing real-time system specifications. Merlot allows the automatic verification of temporal properties for a large set of specifications and requires the interaction with the user only when the complexity of the specification ...

2 [Navigating within the data: Modal navigation for hypermedia applications](#)

Franca Garzotto, Luca Mainetti, Paolo Paolini

May 1996 **Proceedings of the workshop on Advanced visual interfaces**Full text available: [pdf\(6.74 MB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#)

Hypermedia applications combine the flexibility of navigation based-access to information, typical of hypertext, with the communication power of multiple media, typical of multimedia systems. By their very nature, hypermedia applications support *multimode* interaction, i.e., interaction based on a *combination of multiple modalities* that are induced by different media and different navigation paradigms. The potentially huge number of mode combinations in hypermedia can accommodate a ...

3 [Requirements engineering: Towards extensible graphical formalisms](#)

Carlo Ghezzi, Mauro Pezzè

December 1993 **Proceedings of the 7th international workshop on Software specification and design**Full text available: [pdf\(600.10 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#)

We discuss how to tailor a graphical notation on top of a kernel formal (graphical) specification language. The goal is to allow an environment supporting formal specifications written in a kernel formal notation to be extended to support additional, application domain oriented, graphical notations. The semantics of the newly defined notation is given by a translation scheme into the kernel notation. Our approach is founded on high-level Petri nets, the kernel formalism, and graph grammars, whic ...

4 [Text processing - where do we go from here?](#)

Sandra Piazza

October-1981 **Proceedings of the 9th annual ACM SIGUCCS conference on User services**

[Membership](#) | [Publications/Services](#) | [Standards](#) | [Conferences](#) | [Careers/Jobs](#)**IEEE Xplore®**
BRIEFING 1.2Welcome
United States Patent and Trademark Office**IEEE Xplore®**
1 Million Documents
1 Million Users» [Author Search](#)[Help](#) | [FAQ](#) | [Terms](#) | [IEEE Peer Review](#)**Quick Links****Welcome to IEEE Xplore®**

- ☐ Home
- ☐ What Can I Access?
- ☐ Log-out

Tables of Contents

- ☐ Journals & Magazines
- ☐ Conference Proceedings
- ☐ Standards

Search

- ☐ By Author
- ☐ Basic
- ☐ Advanced

Member Services

- ☐ Join IEEE
- ☐ Establish IEEE Web Account
- ☐ Access the IEEE Member Digital Library

IEEE Enterprise

- ☐ Access the IEEE Enterprise File Cabinet

Try our New Full-text Search Prototype **GO**[Help](#)**To Locate an Author:**

1. Enter a last name or select a letter in the alphabet.
2. Once you identify the name, select it to search the database for relevant articles.

1.Options:

» Enter a name to find an author:

Go

Example: Enter Lockett S to obtain a list of authors with the last name Lockett and first name initial S.

OR» Select a letter to browse the author list:

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z | ALL**2. Select an author name to search the database for relevant articles:**

| | | | | |
|------------------------------|---------------------------|------------------------------|---------------------------|------------------------------|
| Piazza A. J. | Piazza C. | Piazza D. | Piazza E. | Piazza F. |
| Piazza G. | Piazza R. | Piazza R. L. | Piazza S. | Piazza S. D. |
| Piazza S. J. | Piazza T. | Piazza T. S. | Piazza V. | |

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z | ALL[Home](#) | [Log-out](#) | [Journals](#) | [Conference Proceedings](#) | [Standards](#) | [Search by Author](#) | [Basic Search](#) | [Advanced Search](#) | [Join IEEE](#) | [Web Account](#) | [New this week](#) | [OPAC](#) | [Linking Information](#) | [Your Feedback](#) | [Technical Support](#) | [Email Alerting](#) | [No Robots Please](#) | [Release Notes](#) | [IEEE Online Publications](#) | [Help](#) | [FAQ](#) | [Terms](#) | [Back to Top](#)

Copyright © 2004 IEEE — All rights reserved


[Subscribe \(Full Service\)](#) [Register \(Limited Service, Free\)](#) [Login](#)

 Search: ☒ The ACM Digital Library ☐ The Guide

THE ACM DIGITAL LIBRARY

[Feedback](#) [Report a problem](#) [Satisfaction survey](#)

Published before July 2001

Terms used **firmware update family byte**

Found 39 of 112,614

Sort results by

☒ [Save results to a Binder](#)
[Try an Advanced Search](#)

Display results

☒ [Search Tips](#)
[Try this search in The ACM Guide](#)
☐ Open results in a new window

Results 1 - 20 of 39

Result page: **1** [2](#) [next](#)Relevance scale ☐ ☐ ☐ ☐ ☐

1 [Heart: An operating system nucleus machine implemented by firmware](#)

N. Kamibayashi, H. Ogawana, K. Nagayama, H. Aiso

 March 1982 **Proceedings of the first international symposium on Architectural support for programming languages and operating systems**, Volume 17, 10 Issue 4, 2

 Full text available: pdf(791.96 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

This paper discusses the role of microprogramming in operating system design and shows several things: (1) advantages of the efficiency which may be gained from microcoded operating system primitives, (2) selecting the most appropriate primitives for implementation, and (3) an analysis of the tradeoffs among software, firmware, and hardware. The authors propose a practical approach of enhancing computer architecture level, from a view point of functional hierarchy of operating systems. In o ...

2 [Firmware approach to fast Lisp interpreter](#)

Hiroshi G. Okuno, Nobuyasu Osato, Ikuo Takeuchi

 December 1987 **Proceedings of the 20th annual workshop on Microprogramming**

 Full text available: pdf(1.14 MB) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#)

The approach to speed up a Lisp interpreter by implementing it in firmware seems promising. A microcoded Lisp interpreter shows good performance for very simple benchmarks, while it often fails to provide good performance for larger benchmarks and applications unless speedup techniques are devised for it. This was the case for the TAO/ELIS system. This paper describes various techniques devised for the TAO/ELIS system in order to speed up the interpreter of the TAO language implemented on t ...

3 [Towards an efficient, machine-independent language for microprogramming](#)

David A. Patterson, Karl Lew, Richard Tuck

 November 1979 **Proceedings of the 12th annual workshop on Microprogramming**

 Full text available: pdf(913.17 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

A machine independent low level language YALLL is presented. This language produces microcode for two very different machines: Hewlett Packard HP 300 and Digital Equipment Corporation VAX 11/780. The efficiency of this language is tested by comparing two examples on both machines to microassembly coded versions. To our best knowledge, this is the first time programs have been compiled and executed on two different microarchitectures. These examples also let us compare the efficiency of the ...

4 [Verification of microprogrammed computer architectures in the S*-system: a case study](#)

W. Damm, G. Dohmen



US Patent & Trademark Office

[Subscribe \(Full Service\)](#) [Register \(Limited Service, Free\)](#) [Login](#)

 Search: ☒ The ACM Digital Library ☐ The Guide

+firmware +update +compatibility +table



THE ACM DIGITAL LIBRARY

[Feedback](#) [Report a problem](#) [Satisfaction survey](#)

Published before July 2001

Found 63 of 112,614

Terms used **firmware update compatibility table**

Sort results by

relevance

Display results

expanded form

☒ Save results to a Binder

☒ Search Tips

☐ Open results in a new window
Try an [Advanced Search](#)Try this search in [The ACM Guide](#)

Results 1 - 20 of 63

Result page: [1](#) [2](#) [3](#) [4](#) [next](#)Relevance scale ☐ ☐ ☐ ☐ ☐

1 [Improved methods for storing and updating information in the out-of-kilter algorithm](#)

Samar Singh

May 1986 **Journal of the ACM (JACM)**, Volume 33 Issue 3Full text available: [pdf\(1.12 MB\)](#)Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#), [review](#)

Currently, network codes based on the primal simplex algorithm are believed to be computationally superior to those based on other methods. Some modifications of the out-of-kilter algorithm of Ford and Fulkerson are given, together with proofs of their correctness and computer implementations using appropriate data structures. The computational tests in this paper indicate that the final code based on these modifications is superior to any previously implemented version of this algorithm. A ...

2 [Status report of the graphic standards planning committee of ACM/SIGGRAPH: State-of-the-art of graphic software packages](#)

Computer Graphics staff

September 1977 **ACM SIGGRAPH Computer Graphics**, Volume 11 Issue 3Full text available: [pdf\(9.03 MB\)](#)Additional Information: [full citation](#), [references](#)

3 [ARPS: a new real-time computer](#)

Kenneth J. Thurber

October 1976 **ACM SIGARCH Computer Architecture News**, Volume 5 Issue 4Full text available: [pdf\(1.14 MB\)](#)Additional Information: [full citation](#), [references](#), [citations](#)

4 [Pen computing: a technology overview and a vision](#)

André Meyer

July 1995 **ACM SIGCHI Bulletin**, Volume 27 Issue 3Full text available: [pdf\(5.14 MB\)](#)Additional Information: [full citation](#), [abstract](#), [citations](#), [index terms](#)

This work gives an overview of a new technology that is attracting growing interest in public as well as in the computer industry itself. The visible difference from other technologies is in the use of a pen or pencil as the primary means of interaction between a user and a machine, picking up the familiar pen and paper interface metaphor. From this follows a set of consequences that will be analyzed and put into context with other emerging technologies and visions. Starting with a short historic ...